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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/328,007 | 06/08/1999 | DO-YOUNG KO | Q54451 | 6191 |

7590

09/11/2003

SUGHRUE MION ZINN MACPEAK & SEAS
DARRYL MEXIC
2100 PENNSYLVANIA AVENUE N W
WASHINGTON, DC 200373202

EXAMINER

WONG, ALLEN C

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2613

DATE MAILED: 09/11/2003

16

Please find below and/or attached an Office communication concerning this application or proceeding.

SM

Office Action Summary

Application No.

09/328,007

Applicant(s)

KO, DO-YOUNG

Examiner

Allen Wong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 4 and 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 15.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see appeal brief, filed 6/23/03, in response to the final rejection sent out on 11/26/02, paper number 9, have been fully read and considered and are persuasive. The final rejection of paper number 9 has been withdrawn.
2. Applicant's arguments with respect to claims 1-3 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Song (5,539,467) in view of Hashimoto (5,608,459).

Regarding claim 1, Song discloses an apparatus for changing a horizontal/vertical scanning frequency in a decoding block for restoring an MPEG signal including a prediction memory for storing I picture data and forward prediction restored P picture data and a mean operating unit for generating calculated mean data for bi-directional prediction, comprising:

a B picture memory for storing B picture data, the B picture data having been bidirectionally prediction restored by the decoding block (fig.5, 52);

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a prediction memory switching portion for switching data output from the decoding block to the prediction memory or the B picture memory depending on the type of picture (fig.5, 55); and

an output data switching portion for increasing the switching frequency of data stored in the prediction memory and the B picture memory with respect to a general scanning method, using the motion vector of the decoding block, and outputting converted data (fig.5, 59; note motion vector information is used and that the converted data is outputted in preparation for display, and that the output data can be switched at 59 with respect to the scanning method).

Although Song has storage of the B-frame data, Song does not specifically disclose the storage of the B-frame, however, Hashimoto teaches the storage of B-frame data in a B-frame memory or a B-picture frame buffer (fig.1, element 44 and see col.3, ln.61-62, Hashimoto lucidly discloses that B-picture frame (bidirectional frame) buffer 44 stores B-frame data or bi-directional frame data, where there are the I-frame buffer 38 and the P-frame buffer 40, ie. prediction memory, so as to allow switching picture data for image display by element 46). Therefore, it would have been obvious to one of ordinary skill in the art to take the teachings of Song and Hashimoto as a whole for storing B-frame picture data in B-frame picture memory so as to permit efficient, quick retrieval of B-frame data as necessary for high quality image display. Also, the combination of Song and Hashimoto is reasonable and valid because both references pertain to the same MPEG image processing ambience. Further, to one of ordinary skilled in the art, it is notoriously well known to store B-frame or bi-directional picture

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data in a B-frame memory since that is what data memory is for. Moreover, the storage of B-frames or any frame type is not novel, special, unique or patentable feature because any one of ordinary skill in the art can apply the simple modification of storing image data in any number, arrangement of memory units for the purpose of storing image data. Thus, clearly, B-frame memory is not a patentable feature.

Regarding claim 2, Song teaches that the memory data read is reduced by half (col.12, lines 7-12).

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Song (5,539,467) and Hashimoto (5,608,459) in view of Richards (5,392,071).

Regarding claim 3, Song and Hashimoto do not disclose the doubling of the vertical scanning frequency. However, Richards teaches the doubling of the vertical scanning frequency (col.6, lines 12-18). Therefore, it would have been obvious to one of ordinary skill in the art to take the teachings of Song, Hashimoto and Richards as a whole for doubling the vertical scanning frequency so as to produce clear display of the images. Doing so would improve the image accuracy and precision and minimize picture quality deterioration during the display of MPEG decoded images.

Allowable Subject Matter

1. Claims 4 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (703) 306-5978. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (703) 305-4856. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Allen Wong
Examiner
Art Unit 2613

AW
8/26/03


CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600